

# FARES ALHARBI

Riyadh/Jeddah - Kingdom of Saudi Arabia.

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With strong background in Mathematics, I have an interest in Computer Science, Theory of Computation especially. I do programming, build complex systems, innovate new ideas, and enjoy by understanding and learn something new. I work on different things, to make different things.

## EDUCATION

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### King Saud University

2016-2021

*Bachelor of Science*

*Department of Mathematics, College of Sciences.*

Learn how to analyze and solve problems through several techniques, how to create mathematical model, how to find the optimal numerical solution if the problem unsolvable, and learn how to think logically and doing proofs, lastly how to read Textbooks and Research Papers.

### WadiMakkah Company

2017

*Internship*

Worked on Android development in native approach (Java), with other tools like Firebase to deal with notifications, Git to manage project source code and collaboration with team members, Trello to schedule and assign tasks. you can find the result of the internship here(Clickable).

### Self-Study

2014 -  $\infty$

*Computer Science*

Undergraduate level, I studied the following subjects: Data Structures, Algorithms, Operating Systems, Compilers, Databases.

## WORK EXPERIENCE

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### Looking for Research Internship

*Present*

*in Mathematics or Computer Science.*

- I prefer an opportunity specialized in Theoretical Computer Science, especially in Computability Theory or Complexity Theory.

### $\equiv$ Mod(N)

*Mar 2019 - Present*

*Founder*

- Developing software's, in industrial approach.

### Akwan Production

*Mar 2018 - Mar 2019*

*Head of Engineering*

- **Worked on animation in browser environment: Javascript Canvas and WebGL.**
- **Full custom made front-end projects, applied techniques from Design Patterns to build scalable systems.**
- Dealt with rendering issues by develop an automated chain using Gupl v4.
- Dealt with different screens resolution issues by develop a semi-transpiler reads the source code and reduce/increase sizes measured by parametric ratio.
- Dealt with different media types problems: different picture sizes, video streaming, developed custom HTML5 player.
- Dealt with different languages, RTL(Right to Left) and LTR(Left to Right) issue.
- Developed custom scheme for content, to adapt with the automated rendering chain.
- Developed components system, to reduce the developing cost. Documented the software's, write usage manual's, and guideline for new employee.
- Developed beautiful web pages with beauty-first in mind, how to choose the perfect animation speed, best font type..etc.

### Innovation Center for Industry 4

*Oct 2018 - Jan 2019*

*System Programmer*

- Worked on **Computer Vision**: YOLO2, and OpenCV.
- Worked on **Business Intelligence**: Microsoft Power BI.
- **Learn** the basics of **3D Printing**.

### Mishwari - Startup

*Jan 2018 - Mar 2018*

*Software Developer*

- **Worked on Dashboard Panel, using Sails and a little bit of Angular.**
- Engaged in business-technical problems: how to estimate delivery time, how to reduce the delivery trip cost, how to make sure the driver arrive the location..etc.

## HAMAH

2016-2017

*Contracted Programmer*

- I named HAMAH.
- Worked on several projects, using Laravel, Firebase and different technologies.
- Dealt with many APIs e.g. Trello API, and many services e.g. Mailing, Hosting.

## Reinbo - Anime Social Network

2015

*Owner*

- My own business, it was a social network
- Developed from scratch in backend(Pure PHP) and use HTML/CSS3(Bootstrap Framework)/Javascript(jQuery) for frontend.
- Developed user authentication system: login, logout, reset password.
- Developed posts system: post different media type, posts timeline, comments.
- Developed notification system, using SSE(Server Sent Event) technology instead of Ajax, to reduce the cost.
- Developed mailing list system: custom email templates, select grouped users.

## SELECTED PROJECTS

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### Confidential Project

2019

*Public Investment Fund of Saudi Arabia*

*at Akwan Production*

- Delivered in less than 72hours.

### Akwan Production Website

2018

*Akwan Production*

*at Akwan Production*

- Full custom made WordPress theme.
- Dealt with custom posts, fields, media.
- Multi-language theme.
- Developed with SEO(Search Engine Optimization) in mind. See more.(Clickable)

### Automate Payments and Registration

2018

*24Etar*

*as Freelancer*

- Use 3rd-party(Zapier) to integrate SaaS 24Etar use it with payment gateway.

## ACADEMIC ACHIEVEMENTS

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**Attend Computation Theory Class**

as audit with Prof.A.M.Artoli.

**Worked on Causal Inference and Bayesian Network**

with Prof.M.A.Alhossaini.

**Attend the 52nd Annual ACM Symposium  
on Theory of Computing (STOC2020)**

Certificate of Attendance(Clickable).

## RESEARCH INTEREST

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**Mathematics**

Group Theory, Probability Theory, Differential Geometry.

**Theoretical Computer Science**

Computability Theory, Complexity Theory.

**Others**

Causal Inference, Bayesian Network.

## MEMBERSHIP IN NON-PROFIT ORGANIZATIONS

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**Member(Clickable)**

Association for Computing Machinery (ACM)

## SKILLS

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**Programming Languages**

Go, C, C++, Java, PHP, Python, Javascript/Nodejs.

**Descriptive Programming Languages**

HTML, CSS, SCSS.

**Software & Tools**

Git, GNU/Linux, LAMP stack,  $\LaTeX$ .

**Microcontrollers**

Arduino (Basic).

**Scientific Skills**

Mathematical Modeling, Statistics and Probability.

**I talk..**

Arabic (Native), English.

## LINKS (CLICKABLE)

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- Personal Website.
- Github Profile.